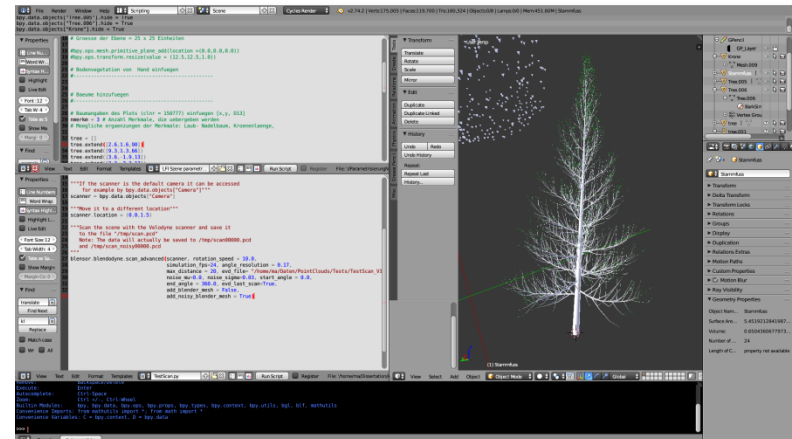




Overview

- Reporting content
- NFI sample
- Variables and their measurement
- Products of NFI
- Open scientific questions

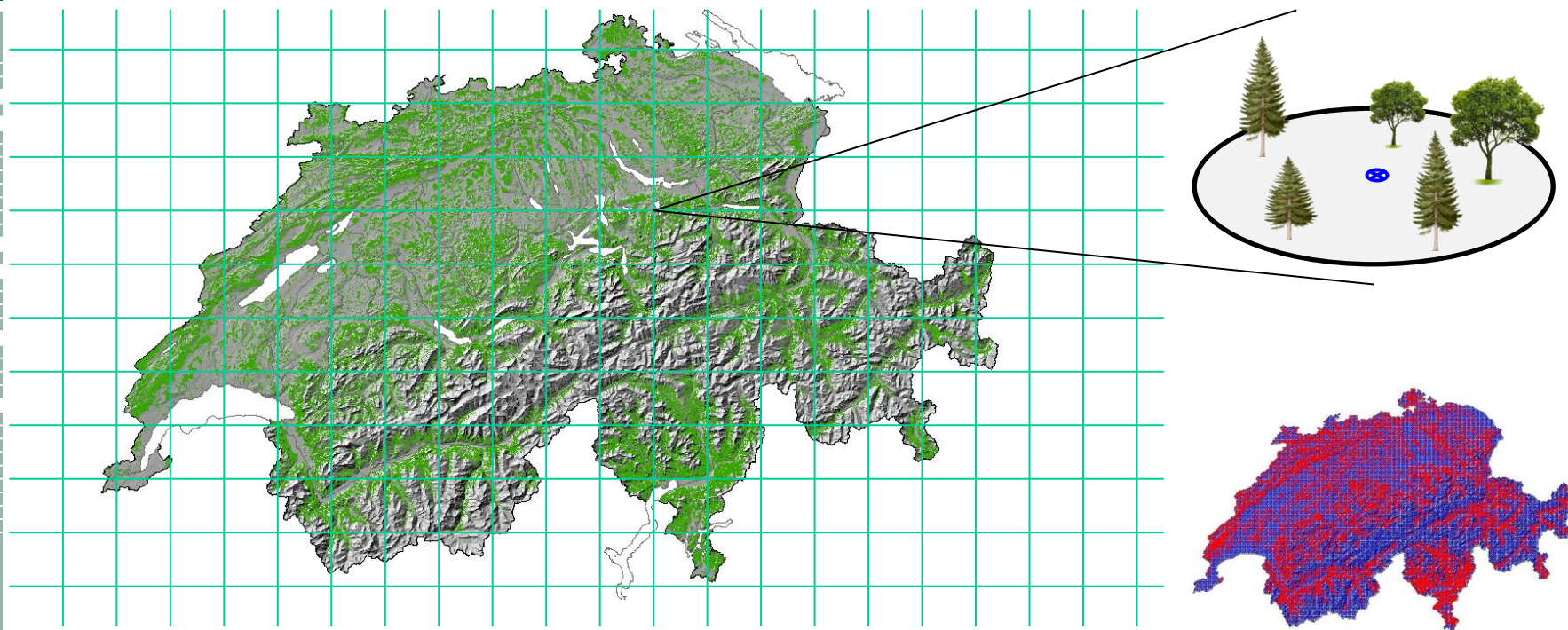
Reporting Content

Monitoring of:

- Forest resources
- Health and vitality
- Wood production
- Biological variety
- Protection forest
- Socio economic values



NFI Sample



~ 6500 sample plots

Data sources

- Aerial interpretation
- Field measurement
- Forest service interview



Variables and their measurement



measurement
of more than 200 variables .

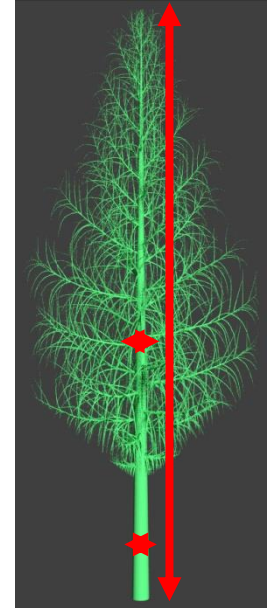
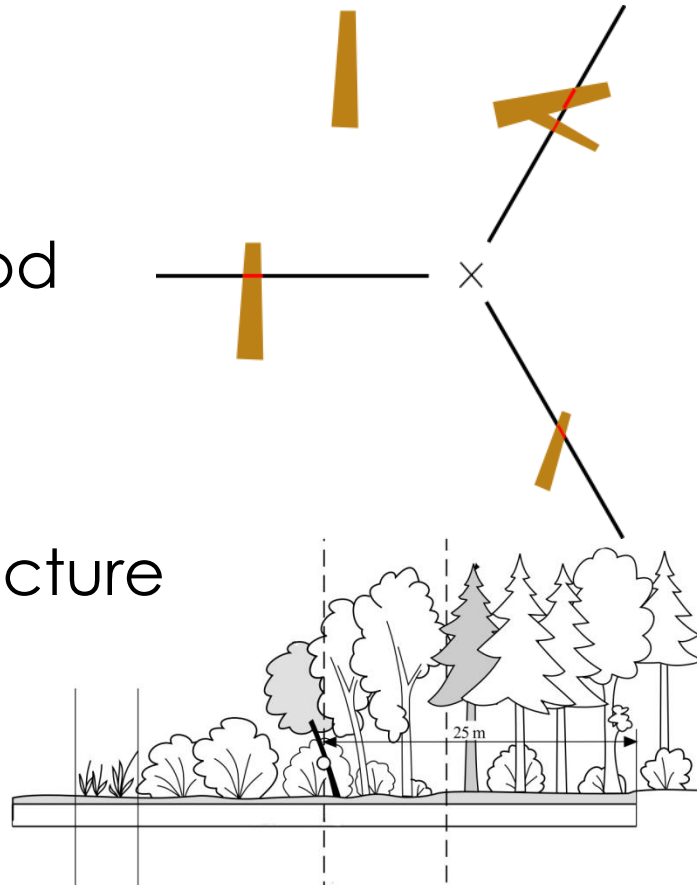


expert assessment

Variables and their measurement

Measurement

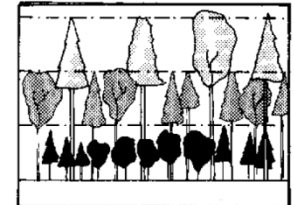
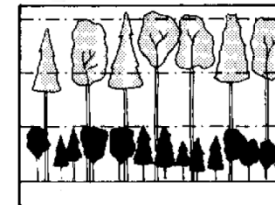
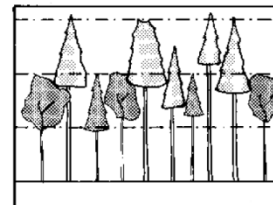
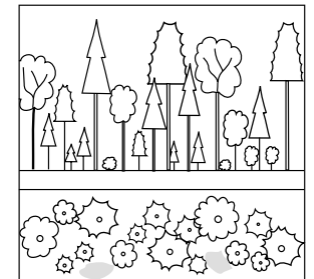
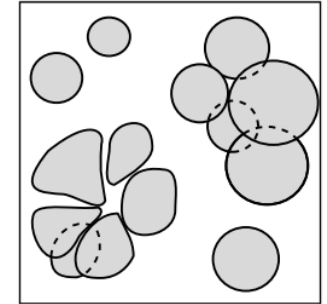
- DBH, tree height, d7
- Lying dead wood
- Forest edge structure



Variables and their measurement

Expert Assessment

- Tree species
- Stem quality
- Tree crown
- ...
- Development stage
- Crown cover
- Regeneration cover
- Silviculture
- Natural hazards (rock, snow ...)
- Forest damage
- ...



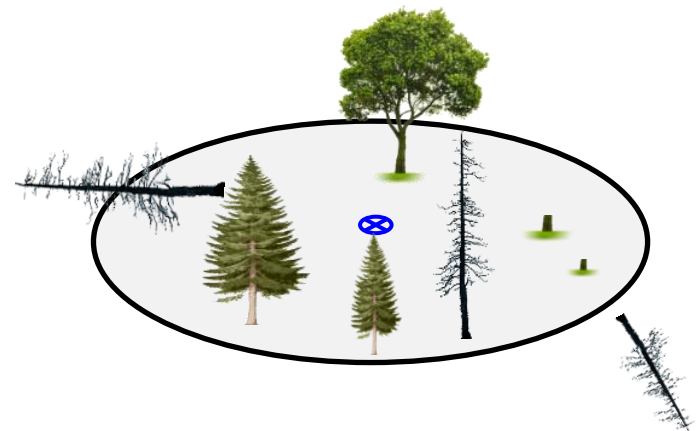
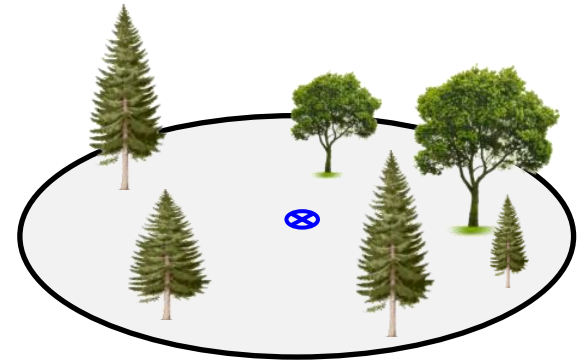
Core Variables

State

- Stem number
- Stemwood

Change estimation

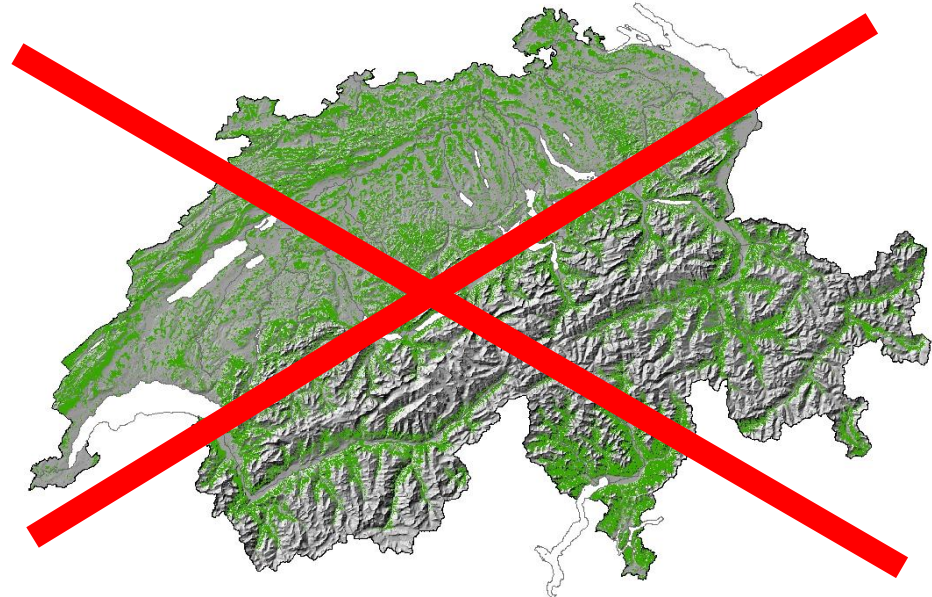
- Increment
- Felling
- Mortality



Products of NFI

- Estimation
- Precision

for
domain, population
(area, group of trees)



LF13

Vorrat: Eigentum · Nadelholz/Laubholz · Produktionsregion

Einheit: m³/ha

Auswertungseinheit: zugänglicher Wald ohne Gebüschwald

Netz: terrestrisches Netz LF13

Zustand 2004/06

		Produktionsregion											
		Jura		Mittelland		Voralpen		Alpen		Alpensüdseite		Schweiz	
Eigentum	Nadelholz/Laubholz	m ³ /ha	± %	m ³ /ha	± %	m ³ /ha	± %	m ³ /ha	± %	m ³ /ha	± %	m ³ /ha	± %
öffentlich	Nadelholz	189.8	4	184.0	6	292.3	5	261.7	3	139.7	6	220.8	2
	Laubholz	155.5	4	150.0	5	86.2	8	28.1	7	82.1	7	90.0	3
	Total	345.4	3	337.5	4	378.5	5	289.8	3	221.8	4	310.8	2
privat	Nadelholz	236.8	9	270.4	6	376.6	5	247.0	7	28.5	25	270.8	3
	Laubholz	198.5	9	199.9	7	116.5	7	81.5	11	207.6	9	147.5	4
	Total	435.3	7	478.3	5	493.2	5	328.5	6	236.1	8	418.3	3
Total	Nadelholz	201.5	4	223.0	4	334.2	3	258.0	2	114.6	6	237.1	2
	Laubholz	166.1	3	172.6	4	101.3	5	41.6	6	110.5	5	108.7	2
	Total	367.6	2	395.7	2	435.5	3	299.6	2	225.1	3	345.8	1

berechnet pro Aussageeinheit: Produktionsregion

Research questions



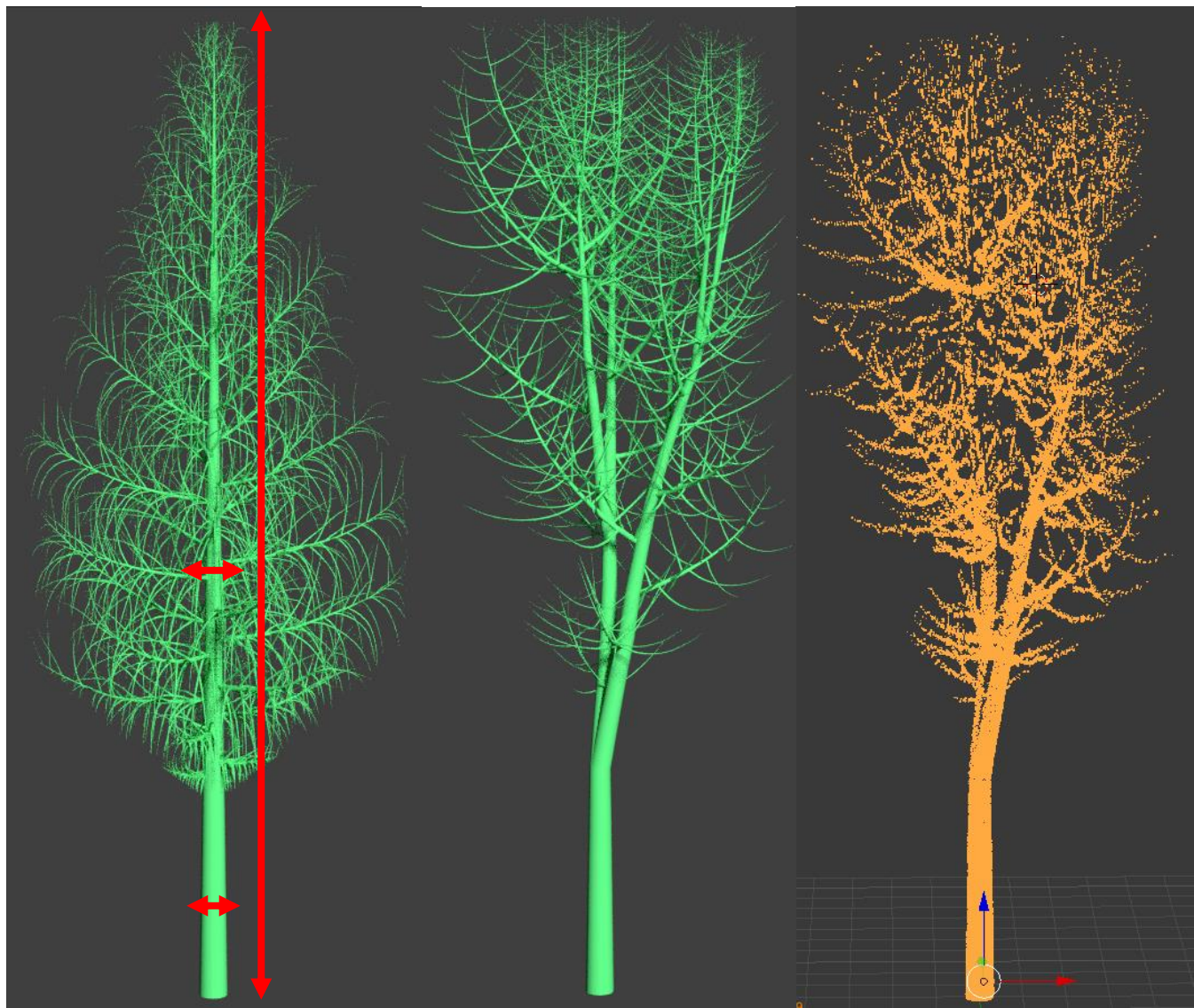
- Stem number



- Stem volume
- Increment
- Felling
- Mortality

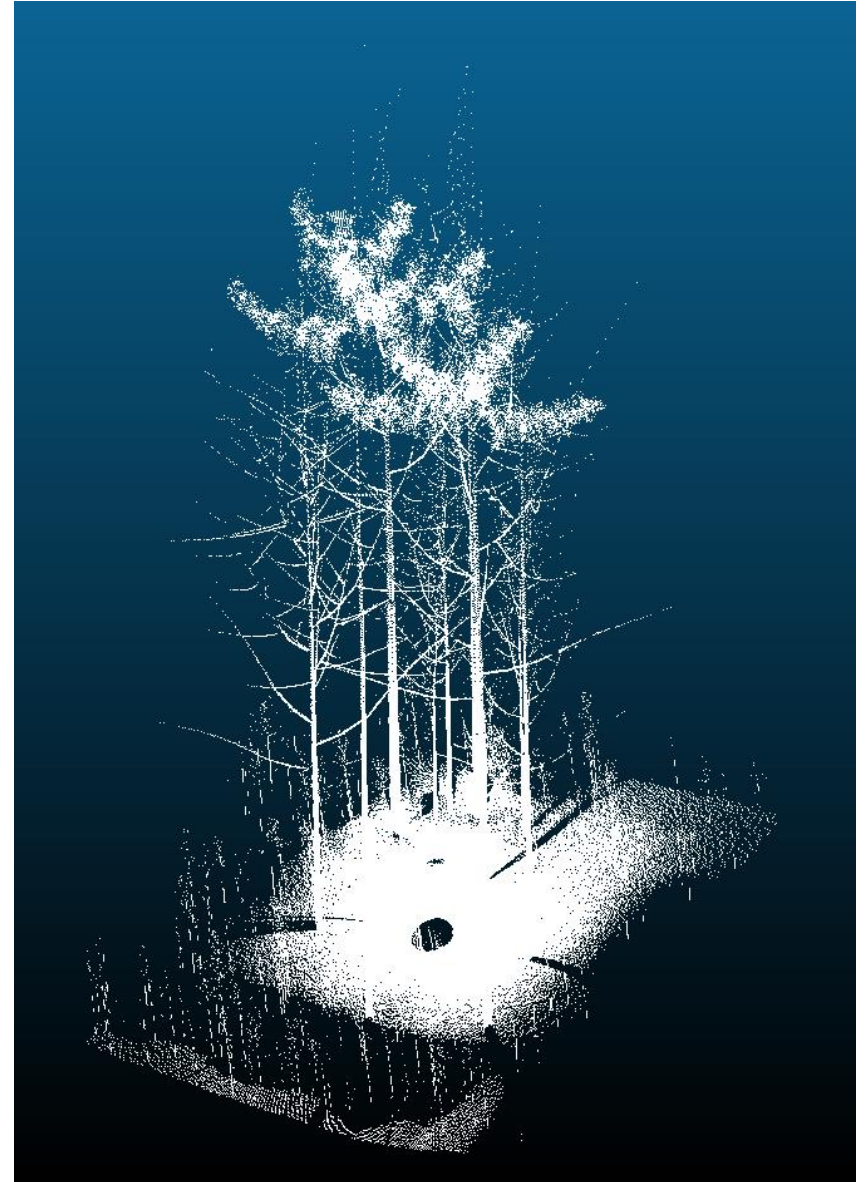
Volume estimation

- Height
- D7
- DBH



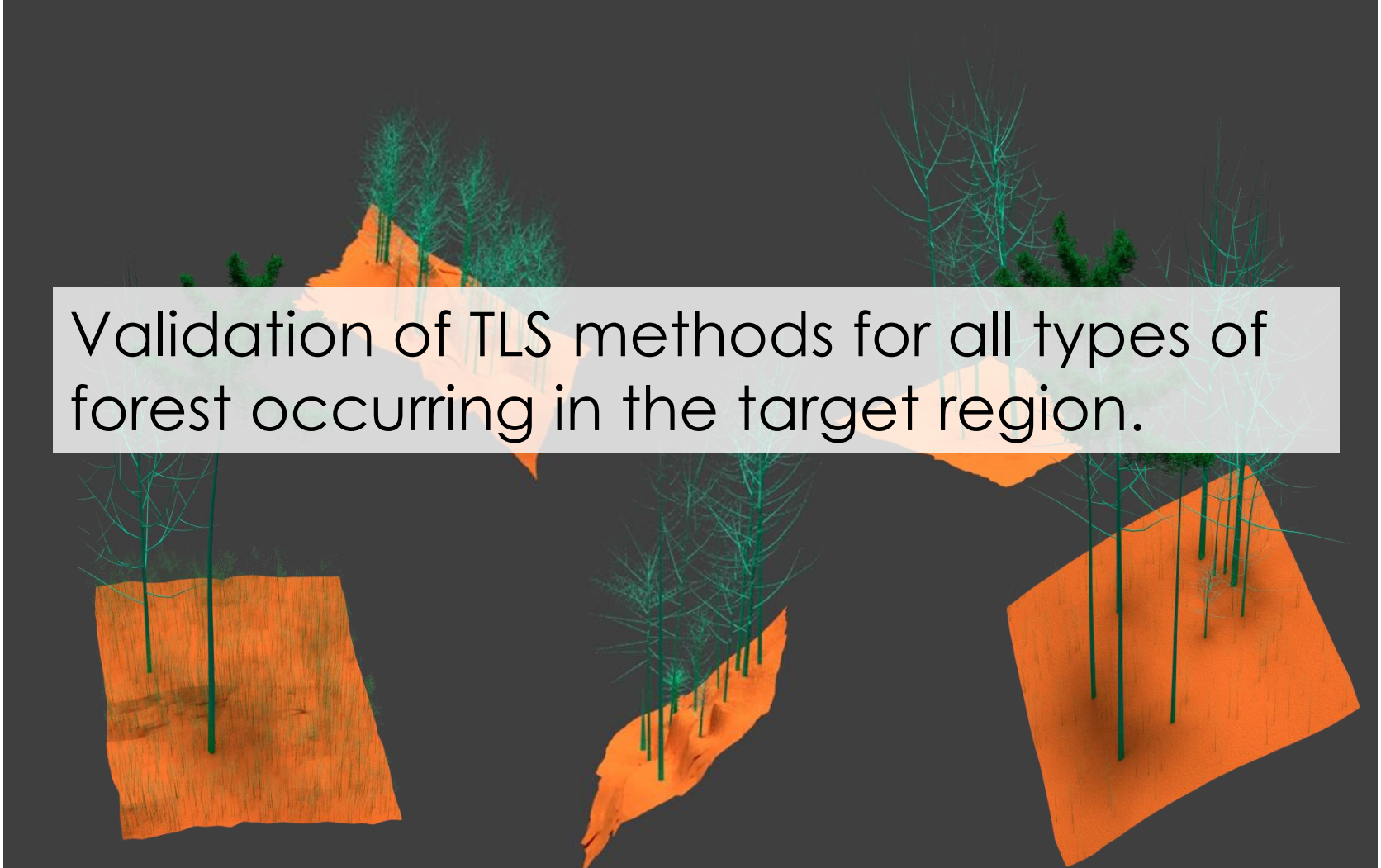
NFI expectation in TLS

Replacement of
expert assessment
where possible.



NFI expectation in TLS

Crucial for NFI !



Validation of TLS methods for all types of forest occurring in the target region.

Research questions

Direct measurement of tree related variables:

- Tree volume (biomass, coarse wood)
- Stem quality (first branches, damages)

Direct measurement of stand related variables:

- Vertical, horizontal profile
- Development stage, forest type
- Regeneration

Validation

- Testing environment for methods